

REPORT

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TO: Regional Comprehensive Plan Task Force

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SUBJECT: Themes for the Water Resources Chapter

GENERAL BACKGROUND:

Clean and reliable water in the SCAG region is essential to the future quality of life in our growing region. The projected growth in population and economic activity is certain to increase the water challenges the region will face in the coming years. These challenges include the creation of environmentally sustainable communities, the management of stormwater and urban runoff pollution in general (and around transportation activities in particular), interagency collaboration and initiatives within shared watersheds, the development of new local water resources and infrastructure, the expansion of current water conservation programs, the on-going availability of imported supplemental water supplies, the increased use of water markets and transfers, the development of improved water treatment technologies and the increased coordination of policy and resources among all levels of government. Without success across this broad menu of challenges, the SCAG region will experience limitations that are certain to undermine economic progress, as well as the sustainability of our vital human and natural ecosystems.

Regional policies have been adopted by the Regional Council to address these challenges. These range from the Council's consideration of significant regional water issues to adopted mitigation measures identified in the Programmatic Environmental Impact Reports of past Regional Transportation Plans. In general, these policies have focused on improving regional environmental quality and best management practices, cost-effective watershed pollution controls and reliable water supplies for growing urban communities. These themes will be developed in the draft Water Chapter of the Regional Comprehensive Plan.

SPECIFIC THEMES:

The Chapter will include the following kinds of discussion:

Theme 1: *The creation of environmentally sustainable communities.*

Water quality and water supply are influenced by the design elements used in planning and creating new communities. Compact development designs that reduce impervious surfaces and increase natural areas not only allow for natural runoff purification treatment, but also save stormwater for groundwater infiltration.

- There is an important linkage between low-impact development, water quality and

environmentally sustainable systems. The Chapter will present the typical features of low-impact development, reference examples in the SCAG region where it is being used, and suggest the environmental dangers that would otherwise follow more typical and traditional approaches to local land use. Included in this discussion of sustainability will be a review of building policies and approaches that create high water use efficiencies and make constructive use of available waste streams, counteract heat island effects associated with certain site designs and protect against the location of development in floodplains.

Theme 2: *The management of stormwater and urban runoff pollution.*

Water quality regulators are issuing increasingly stringent rules to reduce local stormwater and urban runoff pollution. These regulations apply to individual jurisdictions and, by various studies, are expected to be very costly mandates for local agencies in the SCAG region. Based on SCAG's historic interest in "areawide waste treatment management planning", regional policy emphasizes the need for watershed-scale planning (a new way of describing "areawide planning") and implementation of pollution control measures. This scale of environmental management is expected to bring needed improvements on a much more cost-effective basis than from individual projects in each local jurisdiction. This same approach offers Caltrans and other regional transportation agencies new ways to reduce their runoff management costs.

- Several recent studies have underscored the importance of water quality regulations in the region, especially when the estimate of regional costs for purifying stormwater are in the billions of dollars. The Chapter will review the findings of these studies as a way of looking at different viewpoints on stormwater management, the need for source controls and collaborative planning of pollution control measures. This theme has a relationship with the previous discussion of low impact development, an approach that minimizes stormwater runoff and, as a result, eliminates flows that otherwise transport pollutants and impair many of the region's waterbodies. Appropriate land use policies represent one of the most important forms of source control, the kind of pollution management that will save a community the endless burdens and costs of eliminating pollution at discharge points throughout its stormdrain system. Without source controls communities will be forced to comply with water quality regulations either alone or in collaboration with other communities in the same watershed. The Chapter will emphasize the importance of collaboration as a way to achieve greater cost-effectiveness and to favor projects that bring multiple benefits to a community.

Theme 3: *Interagency collaboration and initiatives within shared watersheds.*

As with the collaboration for water quality results discussed previously, water supplies needed for future growth in the region depend on maximizing infrastructure and resource collaboration within the region and within each of the watersheds of the region. When agencies manage their water enterprises without a broad strategic and planning vision there is a greater certainty that opportunities for planning and cooperating more comprehensively will be lost. With these limitations, system strengths will be compromised, especially in emergency conditions.

- The draft will review circumstances in which collaboration will strengthen the performance of the region's water systems and deliver more cost-effective resources and reliability. These part of the Chapter will present key elements of the Draft 2005 California Water

Plan, a broadly formulated effort that emphasizes integrated watershed planning, variable climate conditions and the dangers of aging infrastructure throughout the state and federal water systems.

Theme 4: *The development of new local water resources and infrastructure.*

Because of recent state legislation, the region's future growth is now linked with water supplies. This growth, both infill and otherwise, will place new strains on the current water infrastructure. In some cases it will require retrofitting and replacing old systems; in others it will require extending systems to serve new customers. This infrastructure challenge ranges from system plumbing to water management practices and flexibility.

- The Chapter will review the recent legislative requirement that larger developments must have a long-range water supply certification in order to be approved for construction. Related to these certifications are the findings of the local water purveyor's Urban Water Management Plan. The Chapter will provide a composite summary of the 2005 Urban Water Management Plans adopted by the principle water agencies in the region. These Plans are required every 5 years and must be adopted by December 31, 2005. This composite will bring together the findings of a variety of regional water agencies that must look at the interplay between future growth in their service areas, different drought scenarios, and an assessment of infrastructure needs. The growth forecasts typically rely on SCAG data.

Theme 5: *The expansion of current water conservation programs.*

Water conservation is an indispensable element in the ability of our growing region to achieve needed water reliability. Outdoor consumption of water, either in agricultural water use or in residential landscape irrigation places the heaviest demands on the region's water supplies. : agriculture consumes about 80 percent of the state's water supply and residential landscape irrigation consumes between 50 and 80 percent of the household water supply. New irrigation practices and technology can reduce this outside use, along with changes in plant selection that work well with native, drought-tolerant conditions. Installation of water-saving devices and appliances in new and existing residences is another important conservation opportunity.

- The Chapter will document water conservation trends in the region, noting the success the region has enjoyed in recent years. The linkage of tiered water rates, new irrigation technologies, reduction of runoff and lower water bills will be discussed. Examples will be presented where water conservation goals and new landscaping concepts interact to create more drought tolerant communities that are visually appealing. Other examples of water conservation in Imperial and Coachella Counties will be discussed, along with related complications produced by new water management efforts that change historic practices.

Theme 6: *The on-going availability of imported supplemental water supplies.*

Imported water supplies are increasingly constrained by competing claims and environmental considerations. These concerns raise the importance of the CalFed Bay-Delta Program, the water supply impacts from habitat and other ecological activities throughout the state and other complex management and planning issues related to the Colorado River.

- The Chapter will provide a review of recent developments in supplies from the State Water Project, the Los Angeles Aqueduct and from the Colorado River. Each of these supplies is based in very complex political conditions. Each has significant environmental contingencies that expose these supplies to limitation and even reduction. These challenges and uncertainties in what represents the dominant share of the region's water supplies underscore the importance of local water initiatives that improve the drought resistance capabilities of the region.

Theme 7: *The beneficial use of water markets and transfers.*

The development of markets for the transfer of water between different basins is an important factor for improving the region's water reliability and for improving water quality in the region's water supplies. The ability of water agencies in the region to acquire surplus water from other areas encourages the development of more ambitious groundwater storage programs and makes possible the advantages of conjunctive water use.

- The Chapter will discuss water supplies as they occur and develop throughout California. Against this background, some of the water transfers that have been used to improve water reliability in the region will be described and evaluated for future viability. Key among these activities is the use of water transfers to increase water storage for future needs and to encourage the on-going clean up of contaminated groundwater in basins that are well-suited for future storage. Along with groundwater storage, the region's surface water storage options will be inventoried.

Theme 8: *The development of improved water treatment technologies.*

Current water treatment technologies are chemically and energy-intensive. Along with pollution source controls and natural treatment systems, new technological development needs to be encouraged that reduces the heavy reliance on these factors and minimizes by-products that impair the resulting water supplies. New treatment breakthroughs can also contribute to needed increases in water reclamation and reuse throughout the region, especially in the management and use of groundwater basins.

- The Chapter will inventory efforts in the region to clean up ocean water and brackish groundwater for use. New technologies for cleaning and desalting water have a significant bearing on the future of water supplies in the region. As treatment of wastewater and stormwater becomes more affordable (and when treatment by-products can be conveniently managed), the prospects for drought-proofing the region grow commensurately. Breakthroughs in treatment technologies will depend on continuing investments and innovation.

Theme 9: *The increased coordination of policy and resources among all levels of government.*

With a flexible water policy and resources infrastructure, comprehensive watershed-scale solutions and creative regional governance, water supply and water quality challenges can be met. Cost considerations are always important in meeting these challenges, but policy and program coordination can forge influential coalitions, reduce costs and improve the potentials for success.

- The Chapter will point out the role of system efficiencies in creating more reliable water supplies throughout California. These kinds of efficiencies require close coordination between water agencies that have limited practice with this kind of cooperation. Nevertheless, when institutional inertia and independent management habits are replaced by interactive planning and operating practices, it will be shown that water resources can better meet human and ecosystem needs.